

SECTION 15065

EQUIPMENT/SYSTEM DISMANTLEMENT

PART I GENERAL

1.1 SCOPE

- A. This Section includes the Contractor's responsibility for removal or dismantlement of equipment and demolition debris from a facility and support systems within or outside a facility.
- B. Segregation of demolition debris into various waste streams and preparation for containerizing shall include, but not be limited to, the following:
 - 1. Conduit.
 - 2. Wire.
 - 3. Electrical boxes (junction, switch).
 - 4. Contacts.
 - 5. Lighting fixtures.
 - 6. Motor operated valves.
 - 7. Lighting station.
 - 8. Raceway and troughs.
 - 9. Cable trays.
 - 10. Piping.
 - 11. Assorted valves, fittings, elbows, gauges, spool pieces, etc.
 - 12. Ductwork, plenums, branches, etc.
 - 13. Miscellaneous similar items.

1.2 RELATED SECTIONS

- A. Section 01120 - Debris/Waste Handling Criteria.
- B. Section 01515 - Mobilization, Demobilization, and General Requirements
- C. Section 01516 - Asbestos Abatement.
- D. Section 01517 - Removing/Fixing Radiological Contamination.
- E. Section 15067 - Ventilation and Containment.

1.3 REFERENCE MATERIAL

See the IFB/RFP for the following:

- A. Index of Drawings.
- B. Photographs.
- C. Drawings.
- D. HEPA Vacuum Cleaner Requirements.
- E. HEPA Air Filtration Device Requirements.
- F. Contractor Safe Work Plan Format Requirements.

SECTION 15065

1.4 REFERENCES, CODES, AND STANDARDS

All work shall be accomplished in accordance with the following reference, code, and standard requirements:

- A. 29 CFR 1926.301 Hand Tools.
- B. 29 CFR 1926.302 Power Operated Hand Tools.

1.5 SUBMITTALS

The Contractor shall submit the following for approval:

- A. Detailed removal Safe Work Plan in accordance with IFB/RFP Part 7, Contractor Safe Work Plan Format Requirements for dismantlement of equipment/systems.
- B. Catalog cuts of materials and equipment furnished.
- C. Proposed location, and method of installation of all hoisting equipment, and specialized construction equipment submitted for approval by FDF with the Safe Work Plan.
- D. Safe Work Plan specific to the decontamination and dismantlement of outdoor process or suspect process tanks and pipes in accordance with IFB/RFP Part 7, Subcontractor Safe Work Plan Format Requirements, including:
 - 1. Sequence of work.
 - 2. Methods and materials to control spills and possible generation of fugitive emissions from opening and cutting operations.
 - 3. Method to access tanks and pipes, including health and safety issues.
 - 4. Method for decontamination and effluent control.
 - 5. Methods of dismantlement.
 - 6. Method to size reduce and segregate.
 - 7. Locations of cutting and interim storage areas.
 - 8. Equipment required.
 - 9. Methods to seal equipment and pipe openings for each equipment type.
 - 10. Method to be used if piping or equipment contains nitric acid.
 - 11. Location for interim storage.
 - 12. Allowable floor loads.
 - 13. Catalog cut sheets.
 - 14. Drawings.

1.6 QUALITY ASSURANCE

Calculations submitted on maximum allowable floor loading must bear the stamp of a Professional Engineer registered in the State of Ohio.

SECTION 15065

1.7 PROJECT CONDITIONS

Process material (i.e., green salt, yellow cake, black oxide) has been removed from process equipment to the maximum extent practical by FDF prior to D&D activities. If process material is found during D&D activities, FDF shall be notified prior to disturbing the condition.

PART II PRODUCTS

2.1 MATERIALS

- A. The Contractor shall supply all materials required to seal equipment openings, to prevent spillage and/or migration of contaminants, per requirements of this section.
- B. Fiber-reinforced polyethylene or polyester material approved for outdoor storage: color, yellow; minimum thickness of 6 mils; ultraviolet resistant; as manufactured by Griffolyn, Herculite, or FDF-approved equal.

PART III EXECUTION

3.1 APPLICATION

- A. The Contractor shall supply all items necessary for the performance of the work.
- B. The Contractor shall use mechanical means of cutting whenever possible.
- C. All equipment and systems such as ductwork and piping shall be dismantled, staged, size-reduced, segregated, and either containerized or stockpiled according to the requirements of Section 01120 and the Waste Management Plan (Part 6 of the IFB/RFP). The Contractor may propose to leave non-process equipment/systems, as defined in Section 01120, in place for structural dismantlement. Process and suspect process piping and ductwork shall have their ends (openings) sealed at both ends prior to movement from the immediate work area. Sealing material shall be sufficiently durable to maintain its integrity during handling, containerization, and exposure to weather. Equipment/systems will be inspected by FDF for visible process residues and size criteria per Section 01120 in the project-established inspection area (which would reside in the enclosure if containment is required) per Section 01120. Criteria for decontamination are detailed in Section 01517.
- D. Prior to equipment/system dismantlement, the Contractor shall take the necessary actions to preclude spillage of residual material, if encountered. This shall include the temporary sealing of openings, pipe ends, etc.
- E. Prior to cutting into tanks or piping where the potential for flammable lining exists, it shall be the Contractor's responsibility to verify that no lining exists. Should the Contractor find lined pipes or tanks, the pipes or tanks shall be cut and removed by mechanical means and shall not be torch cut.

SECTION 15065

- F. In some cases, equipment may be elevated from the ground by the means of a structural platform. In these cases, the equipment should be cut away or disconnected from the platform and lowered to the ground. The dismantlement of this equipment shall be accomplished by shearing and cutting whenever possible. If this is not possible, the equipment shall be dismantled at convenient assembly joints.
- G. FDF Radiological Control shall be contacted prior to performing any torch cutting on contaminated surfaces.
- H. Prior to cutting into piping or equipment known or suspected of containing nitric acid or other corrosive, toxic, flammable or combustible material, such systems shall be purged to remove any potentially explosive or otherwise potentially harmful gases.
- I. Equipment which can be removed in one piece during dismantlement of the building will be identified in Part 6 of the IFB/RFP; however, handling of such equipment must still follow all other applicable requirements in Section 01120.
- J. Uncontrolled dropping of materials is not allowed.
- K. Piping insulated with asbestos may be removed in its entirety per the requirements of Section 01516.
- L. The Contractor shall take the necessary actions to preclude spillage of residual material, if encountered.
- M. Debris segregation, sizing, and management shall be in accordance with Section 01120 and the Waste Management Plan located in Part 6 of the IFB/RFP.
- N. HEPA-filtered local ventilation shall be implemented for disassembly and sizing of process and suspect process pipe and equipment and for all burning (e.g., torch cutting) activities on contaminated surfaces.

3.2 INTERIM MATERIAL STORAGE

- A. Where removed materials are staged or stored within the facility, they shall be stored in designated floor storage areas as described in Section 01120.
- B. Damaged areas within facilities identified by the Contractor's Engineering Survey shall not be used for interim material storage.

3.3 SPECIAL INSTRUCTIONS

Lead Materials:

SECTION 15065

- A. The Contractor shall segregate all lead materials (e.g., flashing, vent stacks) and place them in appropriate containers in accordance with Section 01120 and the Waste Management Plan located in Part 6 of the IFB/RFP.
- B. Lead impregnated cloth, used for noise dampening, shall be removed from equipment prior to equipment/system dismantling. Equipment/systems known to have lead impregnated cloth will be identified in Part 6 of the IFB/RFP; however, this identification may not be totally inclusive of all such material.
- C. Prior to torch cutting on a surface coated with a lead-based paint, an eight inch strip of paint shall be removed at the area of the cut.
- D. The Contractor shall (whenever possible) dismantle lead flashing in a manner that will facilitate recycling. This will include minimizing inaccessible surfaces and maximizing straight lengths. This will also include avoiding the use of fixatives on the lead flashing that would require an abrasive method of removal.

END OF SECTION